IN THE CLAIMS

Please amend the claims as follows:

1. (Original) An apparatus for encoding transport information, comprising:

at least one channel;

a first overhead processor coupled to the at least one channel and configured to obtain a first portion of transport information from the at least one channel;

a second overhead processor coupled to the at least one channel and configured to obtain a second portion of transport information from the at least one channel;

a path pointer processor coupled to the at least one channel;

a third overhead processor coupled to the path pointer processor and configured to obtain a third portion of transport information from the at least one channel; and

an overhead extractor coupled to the first overhead processor, the second overhead processor and the third overhead processor to receive the first portion of transport information, the second portion of transport information and the third portion of overhead, the overhead extractor configured to encode the first portion of the overhead and the second portion of the overhead and to provide a field of encoded bits representative of a frame number, a channel number and an overhead byte location.

2. (Original) The apparatus of claim 1 wherein the byte location is given by a row number and a column number.

3. (Original) The apparatus of claim 2 wherein the row number is independent of the frame number.

4. (Original) The apparatus of claim 2 wherein the column number is independent of the frame number.

5. (Original) The apparatus of claim 2 wherein the field of encoded bits is provided from the overhead extractor in parallel.

6. (Currently amended) The apparatus of claim 5 wherein the first overhead processor provides a data byte and a parity bit in parallel along with the field of encoded bits.

7. (Currently amended) The apparatus of claim 5 wherein the first overhead processor provides the field of encoded bits with a clock signal.

8. (Original) The apparatus of claim 7 wherein the clock signal is provided by dividing a system clock signal.

9. (Original) The apparatus of claim 1 wherein the first portion of transport information consists of Section Overhead, the second portion of transport information consists of Line Overhead, and the third portion of transport information consists of Path Overhead.

10. (Original) The apparatus of claim 1 wherein the first portion of transport information consists of Regenerator Section Overhead, the second portion of transport information consists of Multiplex Section Overhead, and the third portion of transport information consists of Path Overhead.

11. (Currently amended) An apparatus for encoding overhead, comprising:

a plurality of channels;

a multiplexer coupled to the plurality of channels to receive overhead and configured to select a channel for output of overhead on the channel selected;

a first overhead processor coupled to the multiplexer output to receive the output of overhead from the channel selected, wherein the first overhead processor is configured to process out a first portion of overhead from the output of overhead;

a path pointer processor coupled to the first overhead processor;

a second overhead processor coupled to the path pointer processor and configured to process out a second portion of overhead from the output of overhead; and

an overhead extractor coupled to the first overhead processor and the second overhead processor to receive the first portion of overhead and the second portion of overhead, the overhead extractor configured to encode the first portion of the overhead and the second portion of the overhead and to provide a field of encoded bits representative of a frame number, a channel number and an overhead byte location.

12. (Original) The apparatus of claim 11 wherein the byte location is given by a row number and a column number.

13. (Original) The apparatus of claim 12 wherein the row number is independent of the frame number.

14. (Original) The apparatus of claim 12 wherein the column number is independent of the frame number.

15. (Original) The apparatus of claim 12 wherein the field of encoded bits is provided from the overhead extractor in parallel.

16. (Currently amended) The apparatus of claim 15 wherein the first overhead processor provides a data byte and a parity bit in parallel along with the field of encoded bits.

17. (Currently amended) The apparatus of claim 15 wherein the first overhead processor provides the field of encoded bits with a clock signal.

18. (Original) The apparatus of claim 17 wherein the clock signal is provided by dividing a system clock signal.

19. (Original) The apparatus of claim 11 wherein the first portion of overhead comprises Transport Overhead, and the second portion of overhead comprises Path Overhead.

20. (Original) The apparatus of claim 11 wherein the first portion of overhead comprises Section Overhead, and the second portion of overhead comprises Path Overhead.